# OPERATING INSTRUCTIONS
# RACK MESH STRETCHER MS/1

## Assembly Instructions

Unpack and identify the following items and sub-assemblies:-

| Quantity | Description |
|---|---|
| 2 | Side frames (short) |
| 2 | Front / rear frames (long) |
| 4 | Foot units |
| 4 | M8 Plain washers |
| 2 | Gripper channels c/w rubber moulding and acrylic jamming bar - short. |
| 2 | Gripper channels c/w rubber moulding and acrylic jamming bar - long. |
| 10 | Floating nuts |
| 10 | Threaded handwheels |

The MS1 and MS2 mesh stretchers are adjustable in size to accommodate differing screens. The MS1 adjusts in both directions, while the MS2 is adjustable only in the longer dimension. Select the desired frame size, and bolt the frame together by screwing the feet through the clearance hole in the web of one piece, and then into the appropriate threaded hole. Tighten with a 13mm spanner (see Figure 1 below).

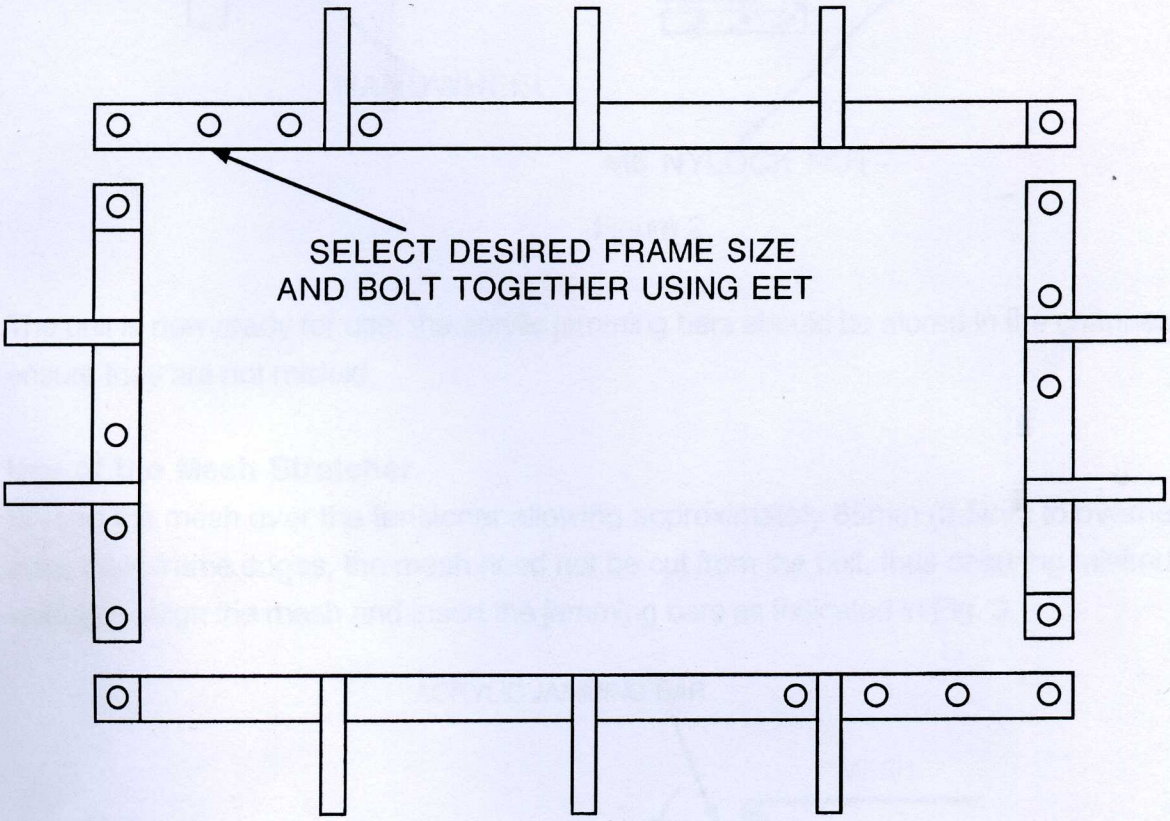


Figure 1.

Insert the appropriate number of floating nuts into the box section of the gripper channel and screw in a handwheel at each hole position which is not designated to fit over a guide rod. ***Thread life will be considerably extended if a little oil is applied to the handwheel threads.*** Establish which holes are for the guide rods by offering up to the frame prior to assembly and screw in the handwheels. With the taller upright leg of the gripper channel positioned upwards and inwards, assemble gripper channels complete with rubber moulding onto the guide rods. Fit the ends of the handwheel threads through the 1/4" dia holes in the frame sides. Fit the nylock nuts onto the threads, but do not tighten fully, allowing the handwheels to be rotated (see Fig. 2).

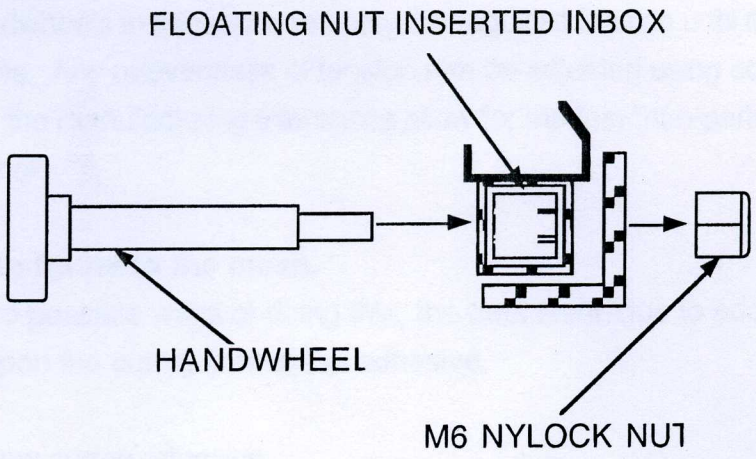


Figure 2.

The unit is now ready for use, the acrylic jamming bars should be stored in the channels to ensure they are not mislaid.

**Use of the Mesh Stretcher.**

Spread the mesh over the tensioner allowing approximately 65mm (2.5ins) to overhang the outer main frame edges, the mesh need not be cut from the bolt, thus ensuring minimum wastage. Align the mesh and insert the jamming bars as indicated in Fig. 3.

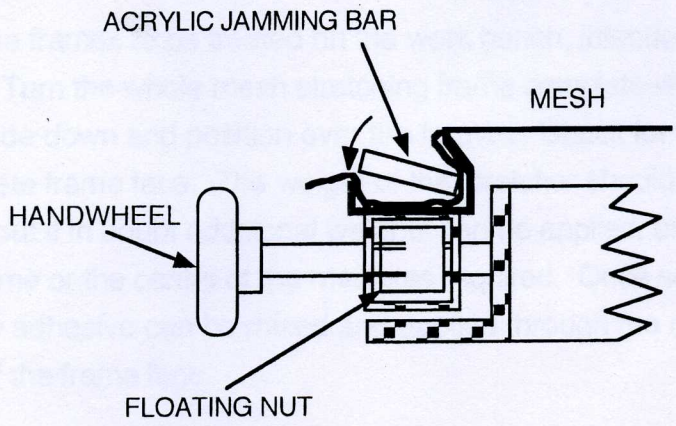


**Fig 3.**

Straighten out any wrinkles by pulling the mesh at either end of each gripper channel, it should slide through the gripper without jamming. Ensure that the gripper channels are as close to the frame as possible and that the additional length of rubber moulding provided in approximately equally distributed at each end of the gripper channel to protect the mesh from the sharp ends of the channel.

Turn the handwheels in sequence to apply the required tension until the mesh is equally taut in both directions. Any unevenness of tension can be adjusted using adjacent corner handwheels, the manufacturing tolerances allow for modest "non-parallel" operation of the gripper channels.

**Adhering the frame to the mesh.**

There are two possible ways of doing this, the best technique to adopt being largely dependent upon the curing time of the adhesive.

1) Slow curing adhesive.

   Mix as directed by the adhesive manufacturer and spread onto the frame or frames to be treated. Whilst still tacky, invert and place onto the taught mesh, applying pressure using weights as required to ensure full contact around the frame face.

2) Fast curing adhesive.

   A quick curing adhesive may not allow time for the procedures outlined above and the following, somewhat unorthodox, procedure may be found more convenient.

   Position the frames to be treated on the work bench, intended mesh face upwards. Turn the whole mesh stretching frame complete with tensioned mesh upside down and position over the frames. Check for full contact over the complete frame face. The weight of the stretcher should be adequate to ensure this but if in doubt additional weights can be applied, either to the stretcher frame or the centre of the mesh, as required. Once set-up and checked the adhesive can be mixed and applied through the mesh onto the underside of the frame face.

   This technique has the advantage that the mesh is totally "encapsulated" by adhesive thus providing superior adhesion together with the ability to ensure position and correct contact before time runs out because the adhesive has exceeded its cure period.

   Finally, when cured, cut around the frames with a sharp knife before loosening the hand wheels and returning any unused mesh to the bolt.

**Technical specification.**

| | HM-MS/2 | HM-MS/1 |
|---|---|---|
| Maximum frame size (OD) | 680 x 950mm | 950 x 1210mm |
| Minimum mesh size | 810 x 1080mm | 1080 x 1340mm |
| Overall size | 904 x 1194 x 64mm | 1194 x 1524 x 64mm |
| Weight | 17kg | 22kg |